

REMARKS

This application has been carefully reviewed in light of the Office Action dated November 16, 2005. Claims 1-10 remain pending in this application. Claim 1 is the independent claim. Favorable reconsideration is respectfully requested.

On the merits, the Office Action again rejected Claims 1-10 under 35 U.S.C. § 103(a) as being unpatentable over Zhou (U.S. Patent No. 6,466,170; hereinafter "Zhou") in view of Okabe et al. (U.S. Patent No. 6,462,714; hereinafter "Okabe"). Applicant respectfully traverses the rejection and requests its withdrawal for at least the following reasons.

As stated in the Office Action, Zhou fails to recite or suggest a second metallization structure. The Office Action argues that Okabe supplies the elements of Applicant's Claim 1 which Zhou fails to recite or suggest. Applicant respectfully disagrees. Okabe recites a side surface slot antenna (see, e.g., Col. 3, lines 40-50) which is formed by a conductor on a top, lower, and side surface of a conductive cubic (see, e.g., Col. 6, lines 30-43). This single band antenna is tuned to a frequency band based on the dimensions of slot 2 i.e., the portion of the cubic which is not covered by a conductor (see e.g., Col. 6, lines 44-58). This tuning can be achieved by varying impedance of variable impedance circuit 10 (col. 7,

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lines 3-5). A control circuit 30 varies the control signal to change impedance between the conductors on opposite edges of the slot, thereby varying the resonant frequency of the antenna. Okabe's conductor does not recite or suggest a second metallization structure that has a resonant printed conductor structure. Rather, Okabe rites only that a side slot single band antenna may exist on more than one side of a cube or plane.

Page 5 of the Office Action argues that Okabe's conductors on the top and bottom of the conductive cube satisfies the limitation of a first and second metallization structure. Applicants respectfully disagree with this argument because Okabe's three sided single band slot antenna is a single metallization structure that exists on more than one side of a cube or plane. Okabe fails to recite or suggest this second metallization structure.

The Office Action continues on page 5 that Okabe, in Col. 10, line 66 to Col. 11, line 4, recites the circuit can be provided in the lower surface of the conductive cubic of the opposite side of the conductive cube. This may be true, however, the variable impedance circuit does not act as a resonant printed conductor structure. Rather, it varies the resistance to current flow across it according to control circuit 30 across opposite edges of the slot. All Col. 10, line 66 to Col. 11, line 4 shows is that the impedance matching

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circuit can be placed on the same side of a side slot single band antenna, although that side is wrapped around a cube.

Finally, Okabe's variable impedance circuit 10 may affect the entire antenna, but cannot tune a single side. So Okabe cannot be used to show a second metallization structure that is resonant. Thus the combination of Zhou in view of Okabe fails to recite or suggest every element of Applicant's Claim 1.

Additionally, Applicant traverses the § 103(a) rejection over Zhou and Okabe because the references cannot be properly combined because one skilled in the art at the time of the invention would lack the motivation to combine them precisely because they are incompatible. Simply packaging Zhou's multiband slot antenna atop Okabe's side slot single band antenna would not have been obvious because tuning Okabe's antenna requires varying the area of slot 2 which includes portions of the side and top of a conductive cubic. This would inadvertently affect the tuning of Zhou's multiband slot antenna and would not be considered an effective way to provide an easily tunable multiband antenna where resonant frequencies in the individual operating frequency bands could be tuned largely independently of one another. Additionally, tuning Zhou's multiband antenna requires increasing or decreasing slot 26 and that would adversely affect Okabe's single band side slot

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antenna. Thus Applicant traverses the § 103(a) rejection of Claim 1 for at least this additional reason.

Also, Applicant respectfully traverses the § 103(a) rejection at least because it is based upon impermissible hindsight. Improper hindsight consists of "use[ing] the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention," see *In Re Denis Rouffet*, 47 USPQ.2d 1453, 1457 58 (Fed. Cir. 1998). Applicant believes the rejection of Claim 1 over Zhou in view of Okabe to be impermissible hindsight at least because the Office Action looks to the elements of Claim 1 as a blueprint for piecing the prior art together, since the § 103 rejection fails to meet a prima facie obviousness test.

Claims 2-10 depend from independent Claim 1 discussed above and are believed patentable for at least the same reasons. In addition, Applicant respectfully believes Claims 2-10 to be independently patentable and request separate consideration of each claim. In addition, Applicant additionally traverses the § 103(a) rejections of Claims 7 and 8 because Zhou fails to recite or suggest a second metallization structure and therefore it cannot be relied upon to recite or suggest a feed pin or shorting pin, respectively, which contacts both a first and a second metallization structure. Applicant requests withdrawal

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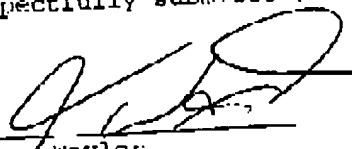
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of the § 103(a) rejections of Claims 7 and 8 for at least these additional reasons.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached by telephone at the number given below.

Respectfully submitted,

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